

SEQUENCE LISTING

<110> MERKULOV, Gennady et al.

<120> ISOLATED HUMAN LIPASE PROTEINS, NUCLEIC
ACID MOLECULES ENCODING HUMAN LIPASE PROTEINS, AND USES
THEREOF

<130> CL001186DIV-II

<160> 4

<170> FastSEQ for Windows Version 4.0

<210> 1

<211> 1360

<212> DNA

<213> Homo sapiens

<400> 1

```

ctcttactct tcagcctgat gtcaaaagca aaagttcaga agttcctcat caataaggag 60
tccttgtgag cagggtgaagc tcacttaact aggcatttct atgatgtggc tgcttttaac 120
aacaacttgt ttgatctgtg gaactttaaa tgctgggtgga ttccttgatt tggaaaatga 180
agtgaatcct gaggtgtgga tgaatactag tgaaatcatc atctacaatg gctaccccag 240
tgaagagtat gaagtcacca ctgaagatgg gtatatactc cttgtcaaca gaattcctta 300
tgggcgaaca catgctagga gcacaggtcc cgggccagtt gtgtatatgc agcatgccct 360
gtttgcagac aatgcctact ggcttgagaa ttatgccaat ggaagccttg gattccttct 420
agcagatgca ggttatgatg tatggatggg aaacagtcgg ggaaacactt ggtcaagaag 480
acacaaaaca ctctcagaga cagatgagaa attctggggc tttagttttg atgaaatggc 540
caaatatgat ctcccaggag taatagactt cattgtaaat aaaactggtc aggagaaatt 600
gtatttcatt ggacattcac ttggcactac aatagggttt gtagcctttt ccaccatgcc 660
tgaactggca caaagaatca aaatgaattt tgccttgggt cctacgatct cattcaaata 720
tcccacgggc atttttacca ggttttttct acttccaaat tccataatca aggctgtttt 780
tggtaccaa ggtttctttt tagaagataa gaaaacgaag atagcttcta ccaaaatctg 840
caacaataag atactctggt tgatatgtag cgaatttatg tccttatggg ctggatccaa 900
caagaaaaat atgaatcaga gtcgaatgga tgtgtatatg tcacatgctc ccactgggtc 960
atcagtacac aacattctgc atataaaaaca gctttaccac tctgatgaat tcagagctta 1020
tgactgggga aatgacgctg ataatatgaa acattacaat cagagtcac cccctatata 1080
tgacctgact gccatgaaag tgcctactgc tatttgggct ggtggacatg atgtcctcgg 1140
aacaccccag gatgtggcca ggatactccc tcaaatcaag agtccttcat tagtgctaag 1200
cctattgcca gaatgggaac ccacctttga ttttgtctgg ggccttgatg cccctcaacg 1260
gatgttcagt ggaatcata acctttaatg aaggcatatt tcctaaatgc caatgcattt 1320
tacctttttc aatttaaagg ttggtttcca aagcccttac 1360

```

<210> 2

<211> 395

<212> PRT

<213> Homo sapiens

<400> 2

```

Met Met Trp Leu Leu Leu Thr Thr Thr Cys Leu Ile Cys Gly Thr Leu
 1           5           10           15
Asn Ala Gly Gly Phe Leu Asp Leu Glu Asn Glu Val Asn Pro Glu Val
          20          25          30
Trp Met Asn Thr Ser Glu Ile Ile Tyr Asn Gly Tyr Pro Ser Glu
          35          40          45
Glu Tyr Glu Val Thr Thr Glu Asp Gly Tyr Ile Leu Leu Val Asn Arg
          50          55          60

```

Ile	Pro	Tyr	Gly	Arg	Thr	His	Ala	Arg	Ser	Thr	Gly	Pro	Arg	Pro	Val	65	70	75	80
Val	Tyr	Met	Gln	His	Ala	Leu	Phe	Ala	Asp	Asn	Ala	Tyr	Trp	Leu	Glu	85	90	95	
Asn	Tyr	Ala	Asn	Gly	Ser	Leu	Gly	Phe	Leu	Leu	Ala	Asp	Ala	Gly	Tyr	100	105	110	
Asp	Val	Trp	Met	Gly	Asn	Ser	Arg	Gly	Asn	Thr	Trp	Ser	Arg	Arg	His	115	120	125	
Lys	Thr	Leu	Ser	Glu	Thr	Asp	Glu	Lys	Phe	Trp	Ala	Phe	Ser	Phe	Asp	130	135	140	
Glu	Met	Ala	Lys	Tyr	Asp	Leu	Pro	Gly	Val	Ile	Asp	Phe	Ile	Val	Asn	145	150	155	160
Lys	Thr	Gly	Gln	Glu	Lys	Leu	Tyr	Phe	Ile	Gly	His	Ser	Leu	Gly	Thr	165	170	175	
Thr	Ile	Gly	Phe	Val	Ala	Phe	Ser	Thr	Met	Pro	Glu	Leu	Ala	Gln	Arg	180	185	190	
Ile	Lys	Met	Asn	Phe	Ala	Leu	Gly	Pro	Thr	Ile	Ser	Phe	Lys	Tyr	Pro	195	200	205	
Thr	Gly	Ile	Phe	Thr	Arg	Phe	Phe	Leu	Leu	Pro	Asn	Ser	Ile	Ile	Lys	210	215	220	
Ala	Val	Phe	Gly	Thr	Lys	Gly	Phe	Phe	Leu	Glu	Asp	Lys	Lys	Thr	Lys	225	230	235	240
Ile	Ala	Ser	Thr	Lys	Ile	Cys	Asn	Asn	Lys	Ile	Leu	Trp	Leu	Ile	Cys	245	250	255	
Ser	Glu	Phe	Met	Ser	Leu	Trp	Ala	Gly	Ser	Asn	Lys	Lys	Asn	Met	Asn	260	265	270	
Gln	Ser	Arg	Met	Asp	Val	Tyr	Met	Ser	His	Ala	Pro	Thr	Gly	Ser	Ser	275	280	285	
Val	His	Asn	Ile	Leu	His	Ile	Lys	Gln	Leu	Tyr	His	Ser	Asp	Glu	Phe	290	295	300	
Arg	Ala	Tyr	Asp	Trp	Gly	Asn	Asp	Ala	Asp	Asn	Met	Lys	His	Tyr	Asn	305	310	315	320
Gln	Ser	His	Pro	Pro	Ile	Tyr	Asp	Leu	Thr	Ala	Met	Lys	Val	Pro	Thr	325	330	335	
Ala	Ile	Trp	Ala	Gly	Gly	His	Asp	Val	Leu	Gly	Thr	Pro	Gln	Asp	Val	340	345	350	
Ala	Arg	Ile	Leu	Pro	Gln	Ile	Lys	Ser	Leu	Ser	Leu	Val	Leu	Ser	Leu	355	360	365	
Leu	Pro	Glu	Trp	Glu	Pro	Thr	Phe	Asp	Phe	Val	Trp	Gly	Leu	Asp	Ala	370	375	380	
Pro	Gln	Arg	Met	Phe	Ser	Gly	Asn	His	Asn	Leu						385	390	395	

<210> 3

<211> 22067

<212> DNA

<213> Homo sapiens

<400> 3

```

ttatggccta accttttttaa ctttgagtta ttttcaagag aaaatttgaa aaagcagcct 60
ttgaggagaa agaagcaatc caacaaacaa aaagataacc acactgtaat aggaaatgtg 120
ttttgaatag gacattggaa gaaaaataat aatcattttt acaggtagat cccaaagtca 180
aggatctatg ttcaaccatg tgtgttcac catcttcaca attgaatgag taaccatcat 240
taagcagtta gcttaggccg taatatgatt cttggactga gatttcaaaa ataccacagg 300
ccttctgaaa ggttaccctt ttctagctcc actatcatct aattttatta aaaaaaaaaa 360
aaaaggaaaa atttgagctt ctagagagta ggggctacca ttttgatatcc cacagggcca 420
aggaacaagt tttaatgtat tcatttaaata taatttcagt atgagtattg aaatatataa 480

```

tagaaatatt	gtaacattat	atatttttcta	tatacttttta	ttatatagaa	aatatatatt	540
acagaatata	ttatttaaata	ttgtagaaca	atatataata	cagaaaaata	tataatactc	600
agtaatatat	taaatactta	ttaaaatagc	aagcttatat	aggaagagt	atggagcatt	660
gtgagaaagt	ttcagcttta	tttctttgac	attactttgt	ttctgcacaa	acaaaagaat	720
tacaggaatt	gtccagatta	ttcaaataac	tcgaagttga	ggagggaata	taagtcaatg	780
atgtagaaac	tcttttaaga	tttgagctag	cctacaatct	gtaaagatct	gtgaaattga	840
actatatttg	tgctatttcc	atattaagtc	aaggcaacaa	atcaatatta	ataataataa	900
catagcactt	ctagaacttt	ctaaagagtc	caataaagtt	ttgttagaaa	ggattgtttt	960
tgaagttaaa	aaccatgaga	aattccagga	aaatccacat	acctatgcca	tcatactatc	1020
aatcagggca	aaacatgctt	gagtcctttca	tcaagactaa	atgattaagg	agtgggtacat	1080
aactttttccc	tgctctgact	agctgaacac	ttcctttttac	tccacatttg	tttaattggc	1140
atgaaatttc	ccactccact	aaaacagatc	ttaggatttg	gacaacacaa	aatatcattt	1200
gttttgaaag	gatttgagga	taaatccaaa	ctaatagaac	tgaaacttct	atattatgct	1260
gggtagcaac	ttagttttcc	ctacccttct	tcagtctggg	agatgaaaga	gattcagtta	1320
cggcttaagc	tccacaggca	tacaaagtga	agcagaaaac	tgaggcacgt	gtgcctccat	1380
tatctggtat	ctcatgtggg	gcttagaggt	aaattgtcgt	tatttggcct	ccatttctgc	1440
ctttaaccac	tggtgtaaac	aaaggttact	gtgccaaagt	tgacagcaac	ccaaatccct	1500
ttggcatgtg	aattagtttc	ctctgccata	ctgctagttc	caaattcctt	ctggtttcag	1560
gatttaggag	tcagggttgc	ctcatcttct	caaatgagtt	acagtcacgc	acatccctac	1620
acactgcatg	gttggcacta	gttccttgat	atatgttact	ccgtttgatc	ctcatgaagg	1680
atcaaattgg	gaaggagat	actattgtct	ctgattgtcc	attaagatct	tgagtatgtt	1740
ctacttccct	gtttgacaca	ctggtttgaa	aatgttgcta	agtcctccca	acaatgacag	1800
atactcagtg	gaaacatgaa	ggattccgct	aaactggtta	ttttgcatca	tgtagaccac	1860
tatttcccaa	cctgcaagtg	catcatggcc	tttgggtgtg	cagggacacg	ccttgggtgt	1920
gtgtctcagt	ctaaagcttc	ctccttttca	caagcttccct	gtttctcatc	tctctagctt	1980
ctaactgtca	ctgtaatcat	ctcttactct	tcagcctgat	gtcaaaagca	aaagttcaga	2040
agttcctcat	caataaggag	tccttgtgag	cagggtgaagc	tcacttaact	aggtaagatg	2100
aagatctatc	ataaccagga	ggcaggttgg	aagggtgccag	ttgcaactggc	agtcagggtgc	2160
aagagctctg	cagtgaggct	gcctgagtgt	ccatcctaga	tctctcacct	ccttggctctg	2220
tgaccttgag	cagggtcttaa	atctctctaa	gcctttgttt	ttttaattga	taaaatgagg	2280
ataataatag	tacccaaatt	aggagatttt	tcagagctta	aataacatac	gtgaactatt	2340
tagagtaatg	cctgccataa	ggggactcag	tagcttatta	ttagtttcat	acaatttgaa	2400
aagtttcata	atatttgcag	atataagatg	atcttcaacc	agatagctaa	tgtatgcaa	2460
gctatttagc	ttcagaagta	aactctgcat	ttctagaagt	taaatattac	tttgttatag	2520
tgaattatct	gtaatatatta	tctcttgctc	actttttataa	gaaaaatagt	gaaagcattt	2580
attaagaact	tacactgcac	taaatgttat	atatgactta	atcctcacta	taaccctatg	2640
agataggtta	cattattgtc	ctaattttac	taacaaggaa	accaagagac	aaagctacta	2700
aaacacttgc	ctgagggttag	acatcttctt	ctgtgggtgag	gctggatttc	aaatttagac	2760
catttgactg	tagcacttat	atgatgagca	tgctgttttag	tgttatagt	ttgggtctacc	2820
tttgaataga	catactttta	aaccatggca	aggaagttag	actgcacatt	gaaatatgta	2880
aaatttgcct	ttgggtgcca	cgtgagaaat	agtcacatca	ctagaaacta	atcataagct	2940
tttgtgtttg	gttgaggtttt	tattgatcca	tttttcttgt	ttactttgtg	ggatactggg	3000
cttaactagg	ggatacctcc	actttttact	tggccatggg	atgaaaacct	gtcctctgaa	3060
tcttttagata	ttttggcaaa	ttgtaggcaa	acaaagactt	aaagcaattc	aaccttgatt	3120
aaaataagac	caaaaatgcc	tccatacttg	attaaattta	tttcatttta	ggaactggat	3180
tataatcaag	acaacttcta	catgaaaaaa	tagattaata	gtgctccaag	ttagtccact	3240
gtattttattc	ctttttatac	attatctgcc	ttcgggtgta	ttcaagtttt	cattaatcat	3300
taataatttc	actaatcatt	ttatttcatt	aatcaacatt	gatagttaaa	attaatctgt	3360
gaatattaaa	tgttttatgc	caggcatttc	tatgatgtgg	ctgcttttaa	caacaacttg	3420
tttgatctgt	ggaactttta	atgctgggtg	attccttgat	ttggaaaatg	aagtgaatcc	3480
tgagggtgtg	atgaatactg	taagtcatgg	aaaactgtga	agaacatcaa	ataaagcagg	3540
actaatggag	tatgaggtta	cgaaggtcc	tgttgtaaca	gaaaatctct	gataaaacag	3600
ataaaaatgta	gatggttttt	aacctctgca	agagtcaagc	tagtttagatc	tttgtctgaa	3660
aaacaaatac	tgtccggtaa	tgaaaaccaa	attgtgctat	tgtgctatct	atctatctat	3720
ctatctatct	atctatctat	ctatctatct	atctatctat	ttatctatct	atctatagat	3780
agaacctcct	cttttgaatt	tatgttttaa	gaatatcaag	ctatttgttg	atatacatga	3840
ttgccttcta	ttgatctata	gttctattac	ttttaaagca	agaggggtct	caaaagacaa	3900
ttgacttgat	aatatagctt	tgtcagaaag	aatgggtcaa	tgctaaattt	tcccccaacc	3960

ccccaaaata	ttagccaata	gtagatattt	tttaaaattc	tacttatttt	gtattaagac	4020
tttattttatt	aatttttacag	ttacctgggtg	ctacaaattt	cagataattc	accctaataa	4080
gcacacaaca	gatggtttgt	tttgattcct	ttttatatcc	tttggaagaag	ttccactaac	4140
gactgtattt	ttactgggca	gagtgaatc	atcatctaca	atggctaccc	cagtgaagag	4200
tatgaagtca	ccactgaaga	tgggtatata	ctccttgcta	acagaattcc	ttatgggcga	4260
acacatgcta	ggagcacagg	tacaagatat	gtctctcctg	aaaaggggac	tgcattgacc	4320
tcctgcttct	caggaggaat	ttaatgctag	atatgcatca	acagagttaa	tcaaaattgg	4380
tttgaattat	tggattagtc	tttaaatagt	tatcagggag	gtcactctt	tgctgataa	4440
ttctctgaag	acagacagga	acctaaaaat	acaaacagca	agactgatct	tgctaactgc	4500
aaccagaggt	acttgttagg	gtgtaaacag	aaaggcagag	cctgcatttt	gtcacctcat	4560
tactgattta	tcatgtggaa	aattgctttg	tcccaggaaa	atggatcctc	tcattgtcag	4620
aaggagattt	tctaggttgt	atgaaattga	ctctggggca	cccaagaaga	acctctcctg	4680
ctcccactaa	aattaagggg	cctccctctg	caggataaaa	aacaatctag	ttaaatgaca	4740
acgcatttct	gaaaagtttt	ccaggactga	aaaccttaac	atccacatac	actttgatct	4800
aaggggacaga	cggttcatag	aatgaaagag	tatgggtgtca	ataaggcttg	aattctagaa	4860
tgaggagcca	gccatgccat	agcaggggaa	tgatactcct	taaaagggaa	aatttaacta	4920
caaatcctct	gaagtagaaa	tgataagaat	aacccaaaata	tctgcaatgg	ttcaatagca	4980
aataattttat	tggcagctgc	ttacctgtgt	catttttgc	cttttttccc	accacacata	5040
ttaaggagca	gctgaagtca	tgtttgacat	tctctccctc	ttttatctcc	agtttcagaa	5100
tgaaaaatga	gagtgaagata	tgagtagttt	tactagttaa	aatatgaaac	accaggttaa	5160
atttgaaggt	cagataaaca	acaaataatt	ttgtataagt	ctcattttta	gataatacta	5220
aaaagtcatt	atttattcac	tattatcact	atttataaaa	ttttgtagag	catcctggat	5280
ctttttgctt	acttttgctt	ttattttttg	ctaaatctgg	caatcccagg	cacatgtgtg	5340
aaggagctgt	gaaatataaa	aggagaaaac	ttttatggga	aagatttggc	ttaaggagag	5400
ataatttttg	aaagatttag	aattaaagat	cattcattag	atgtaatgtt	ctaaataact	5460
tatatcagtt	aaacttctca	tcaacaatat	gagatgggta	ccactaatag	tcaccatttc	5520
acaaatgatg	aaattaaggc	acaaccggtt	atgttaagag	gcctaaagtc	cacaaatagc	5580
aagctgacag	accagaattt	aagcccaggc	atgctggctc	cagagcctgt	gctcttagtc	5640
attaaattat	agtgccttac	ttgaccttcc	accttggtta	ctttggatct	ccctgaatgc	5700
tctctctccc	tcagaaatac	tggaggttgg	cagagggaca	ctgagctgag	catattattg	5760
tagtttttaa	atgctctcca	ctggacagaa	gatgggggat	ttgaatagaa	atttgggtgag	5820
gaactaatca	gtgtccattt	acactcacct	cctcttctct	cctggaagag	ctataggact	5880
tgagtaagca	tgataaattt	cgtgtctttg	taaaccacac	ccaggaaatt	tgtatataca	5940
aatacataga	gcacagtagt	tatcaggaca	gactttgaca	taaaaagaac	tgggtttgag	6000
tcctgctct	ggccttctta	tctgggtggc	cctctgggaa	agttacttaa	ctacataaag	6060
ttttgtttcc	atatctacaa	aatgaggttt	ctcaaaatag	cagctagttt	atagagttgt	6120
tgcaagaatt	tagtaagcta	atacatataa	atacgtcaac	atagcaccag	gtacaaaaat	6180
atgtgctcaa	gaaactgaag	ttacctgatt	ataatgctct	atactattga	caagggaata	6240
gtgaaaacag	tttttgtttt	accatgtgtg	tatgtgtgtg	tgtctgtgat	gtttccgcac	6300
tgctctattt	aacataaatt	actctcactc	tttctctctc	tctctttctc	tttctccctc	6360
tctcatctta	ccctttcccc	caccaggtcc	ccggccagtt	gtgtatatgc	agcatgccct	6420
gtttgcagac	aatgcctact	ggcttgagaa	tattgccaat	ggaagccttg	gattcctctc	6480
agcagatgca	ggttatgatg	tatggatggg	aaacagtcgg	ggaaacactt	ggtcaagaag	6540
acacaaaaca	ctctcagaga	cagatgagaa	attctggggc	tttaggtaaa	tattagctaa	6600
gaaaactcaa	gggggaaatt	ggaggcaatt	ttaaaaaat	aacgtggacg	ctattaatga	6660
ttatctttga	cgcttgaagt	catatagctc	cttgtagttt	ctgttaagat	ctcaaaggag	6720
ggtaacagca	agaagctctg	atttttcact	gattctccca	caagcaaagt	atggcatttc	6780
aacaagatca	tttttacatc	caattctgtg	aattctatgc	attaaaagta	tgtccaaaga	6840
gacagctcag	gaaattatca	tgaccaatgt	gcacattcat	tcagccaatg	tttactgagt	6900
ggctactgta	tgcgctgttc	taggccccga	acattcaaac	agggaaacaga	caaactctga	6960
cctcacaaag	cttatgttca	tttttagtgat	aattttacaa	gtcattgctc	ctggattgcc	7020
aatcaactgt	gtaaagatga	tttggaccag	gaccttattg	atthagagaa	actgtgattg	7080
atthagagaa	actgagatcg	cacatagtac	catttttcagg	aaaactccaa	tattagattt	7140
ttaaaacctt	gttaatgggc	aatgaagaag	aatctttttt	gatattcttg	ttcttttaat	7200
ggaagagttt	tctgctgtca	ccagaggaca	ggctgatgcc	tgcgatagac	ttttctttct	7260
tcaggccctaa	gctccctgtt	ggtttgtaaa	cctgatgcta	gaacagactg	tgtattccta	7320
ttacattaat	aaaacattca	gtaccctctg	aaagtttgag	aatagtggag	gaatagaata	7380
gaatgttata	gtctgagttc	ttgggcaggg	gcaagcatca	ggaaatattg	aatcattagt	7440

ctttaggagg	tgtcacaaca	attctcctat	tcttgtaagt	cccaatctat	agatttcctc	7500
acatgttctt	ttaataaaca	ggcttctagc	ttatggaata	cctgatttga	ctaaatgtta	7560
tataggccct	tttgttcctc	ctgtctgaag	aacaaaatac	tagtactatg	gaatattggt	7620
atatattaaa	tatatatcta	tatatccatg	tggacaggaa	tactactact	aacaacatct	7680
tactgagcac	ccactggcag	ccagagtcgt	ttctttcata	ctattaaacc	ccgttagcag	7740
ccccgtaaac	caggtactac	cctgtttatt	tcccaaatac	gaaaacatag	gctcagagca	7800
tttcagtaat	ttctcaagag	ttgcaaaggc	cataaatagt	agaatcatga	tttacaaaac	7860
ccctgtttcc	aaagatgggt	attaaatggt	cctaacaatt	gtgaagcctc	atgtgggagt	7920
cagaagtaga	ggcacacaag	ccagatgggg	aaagggaggg	caaagaaaag	caagagaagg	7980
gaaggaagag	gagggatcat	aaggttgaac	ttcaaataac	atacacaagt	ttcgaaagtg	8040
ttcctcttat	aaggaagtaa	aatgtacata	tgcagaaaaa	caaaaagcta	caatagccta	8100
catataattg	gataaataat	gaaatacaca	ttgaatctaa	gtaaacagca	tagaatctgg	8160
gtgtaaaaaa	gaagtgaagc	agtgtctctg	gttttaaaact	taaacttgca	agtattttata	8220
aaagcccctg	ttttattttt	cagttttgat	gaaatggcca	aatatgatct	cccaggagta	8280
atagacttca	ttgtaaataa	aactggtcag	gagaaattgt	atttcatttg	acattcactt	8340
ggcactacaa	taggtatgtt	tatgaggggc	actgttaggt	gtgtttttga	gggtcagttt	8400
tctcagagtc	ttacaggagt	tcacctttat	gttggaataa	aacaactggt	acttatagt	8460
ccctcaattc	cctgtcctct	gctgggaata	accctagtag	tctaagtagc	tgtgagcctg	8520
cagtgcacag	actatatgta	gggcaaacct	ttcctgggtc	tctggtcaca	gcagcatatt	8580
gactacggtg	atgcaatttc	ccaggaataa	catgtgttcc	aaattcaaag	aaataattcc	8640
acagagtaag	tttctagatt	ccctctgagc	tgaaaaagta	aaattcaatg	ccatggaata	8700
tggctgaaac	ataataaatg	tgcatacaat	atctctttct	cacaacccaa	atgggatttt	8760
taaaaaataa	aaggggaagg	cttataccta	tatttaaaaca	aattgaaaag	gcatgggtat	8820
atttgtttgt	gagttggaac	acacaagctt	actataataa	atcaattgag	cttatctatt	8880
cagtgtgtga	tttagtat	atgaaatagc	aagtaaatgt	aagcactatg	tagaaatttc	8940
taaagttttt	taagctgaca	acttacttct	taatttactt	actttactta	atttacttta	9000
caatttactt	tccaggtatt	ttggaaagaa	atcaataatc	tagttccaag	taaaagttga	9060
aaggaaccca	cactaataaa	agctttgaat	ttgtcattga	acttccacta	aagtttccaa	9120
ttttaagaga	ataaatcatg	tgaagtgc	atatttcagt	ttagggaaat	attttcatta	9180
tcaccactat	catcagtaac	aaacatatat	tcattagtag	tttagattga	caggcacttt	9240
ccaagctcag	aacaggcagt	tagcatcagt	cagcatatac	taaaaaagta	tcaaagaact	9300
cataggagat	caaaaatgcc	accaataggg	aaataattac	agtatctaac	acttattgag	9360
cattcgttat	gtgtaggggc	ttgtgttcag	gaccttcccc	acagtatctc	cctctgatct	9420
tcaaaacaac	ccgaatgtta	ttatccccat	ctcatagaag	aagaaacaca	agttcagaac	9480
acagattcaa	accagatgta	tctgattttca	ccaatagggg	gtgtaaggat	tccggagaaa	9540
tgggtgtagag	aagaagaaat	gacttttagtt	ggttttggaa	agtgggtagg	acttagatat	9600
gctcttatac	ttgatctgca	aaaaaaaaaa	aaaaaaccat	ggagaatttg	attatctgtg	9660
ctctgtgttt	catttaggac	ataaatat	ttagttagctg	ttgtttgcat	tttggacaga	9720
gcaatttctg	ttatgtaagg	agcaccctct	ctttgttagga	catttagtag	gtcccagccc	9780
attaaacagg	gctctgcagt	cagcgtgacc	ctcaaaaatc	tcacctccac	acatttccaa	9840
acaccctctg	gggaagtact	attcctgatt	cagagtcttt	ttatcaattg	ttcagtcagt	9900
tattctcagtt	cttctttttc	tggccaagac	agtttttaattg	ttccaacaag	tgtttcagta	9960
cacacataca	cacacacaca	cacacacaca	cacacacaca	cacatgctag	tggaggccca	10020
ggaagggacc	tctggaaacc	aaattatatg	gatattctcc	ctagcctacc	cagtgttgtg	10080
ctaattctcca	tcctcacaga	tatacaaagg	gggtgcaatgc	tactgctgaa	agagcaaagc	10140
aaatggagat	gcctggtcct	tactgggcca	tcgtggatgc	taggggaaagc	ccctttcttt	10200
ttggaaacag	ggaagagtct	agaggggtga	aaaacaccca	gtaagacact	gggagcagtg	10260
aaattttcatt	ccatagttag	aaagaaaacc	tgttagaata	actgggtgat	gctgcagaaa	10320
gaaatcaatt	cacctctgtg	gactgattat	ttgcttctgg	aagctctgtg	attcattctg	10380
gcatctcaga	gttagggatg	aaatgagaat	gttgccagca	tttaccctat	gcttgggaag	10440
tttacacagc	agtagctact	ccagcagctt	aacctacc	tttccctctg	caactactcc	10500
atttccccca	atcaagtcaa	actgtccata	aatagaataa	aataaaattg	gagacttgag	10560
agcagagaag	actgaaggca	gattatcttt	atagaataac	tcagaagact	tccaattcat	10620
ccccagtatg	atcacgatag	aaggaaaaaa	tgactaagca	gagccccaat	tttgtagtaa	10680
acattgcgta	agtattttat	tttacaagat	tgtcttatct	cctgttctct	cagggtttgt	10740
agccttttcc	accatgcctg	aactggcaca	aagaatcaaa	atgaattttg	ccttgggtcc	10800
tacgatctca	ttcaaataac	ccacgggcat	ttttaccagg	ttttttctac	ttccaaattc	10860
cataatcaag	gtaggctcct	ttcaacaaaa	tgtacctgag	gatctcattt	tggatcataa	10920

atccttatta	ttttcaaate	tactgtaaag	taaaagtagg	aaatttagat	aaaatctata	10980
gaacttagac	tctgtgggta	tgtgcttgtg	tatgtgtgtc	cctgctgtgtg	cgcatgtctg	11040
tgccatagta	tctgcaggtt	ctgtaatata	atttactata	caaggctatc	agcaggctga	11100
gtatatgtca	gaatttctag	ctgaactgag	tgctatatga	caacaaggat	ttttcttgtt	11160
ttcccaagt	tttttgttc	catttagtca	ggtaggtcaa	tgaattcaca	ttgccccaat	11220
gaaagacact	tcaagttacc	cataatcact	gatgtgtcca	attttgacat	tagaaaaacc	11280
tgattaatat	attccttcca	atatggaaac	ttgcccta	aactaaagct	aagattccaa	11340
agcctaaatg	tattacagct	caagtattaa	ttcaaata	tattgggtat	ttttcaggag	11400
ttgaaaaagt	catttgggtg	ccaattgtgg	atttgggatt	ttatctatta	aagggttttt	11460
tttttttttc	tctttgcttt	tgtttctcta	caaaggctat	tgccacaatg	aacacagcat	11520
ttaatcaaat	tccagattgg	cctttgaact	tgggatgatg	gataaaatgg	atttgggcca	11580
aaattgaagt	caaggagacc	agttagaata	tcaaaataat	tcatatataa	gaaaatgaga	11640
cggttgggtt	gggtagagt	gtaggaatga	aaaaaattat	ttgtgagcta	acacaaggaa	11700
taatttccat	agggccta	aatagttagg	tctgataata	ctatggctctg	ataatagttt	11760
tattgtattg	tttactgaga	gcacaaatga	tgtaacttcc	ttattcaaga	gcttttctag	11820
tttattttaa	aatgtgttga	catcagttag	gttttaatgt	tttctatatt	tggacagtgt	11880
gagcaaaacta	atttgtttaa	ttaaattcag	agagagatac	atctatctgt	aaatacatat	11940
atgctgtgtt	tgtgttgcct	ttcctacata	ggctagctat	aaggcaaata	atgttcctgg	12000
gttatctcag	tttcacattt	cccactgtca	atattcctgc	tacttttaag	tcccatatcc	12060
tgctcttttc	ttcctgcagt	ttcccccaga	agctccaaga	ccccaccagg	aatccccatc	12120
caagtttact	ttcccaactc	ctggaagtgt	caattgtgct	gcctttgtga	cattatcata	12180
tcttttctgt	tcaatgggtg	cttctctttg	gctcactgtt	ctctactttt	cagcctgaga	12240
gctggcta	ctgggacagt	actcgaatgc	agtgtacaca	tgggtaacat	ggaaaacccc	12300
gattttccct	tattattcaag	gtattatttg	accttaagaa	aaactgtttt	acatttcata	12360
ccaattaatg	agaaaaaat	attggcaagc	actgactggg	cagaatacag	ggaagcttca	12420
ctatggagaa	gtgaatttgg	gattgagggc	ctttattgca	atctccttgt	aaataatatt	12480
tgatactctt	cctcatctgg	agacacattc	ctaagtaact	tttctgaat	aatttgggtc	12540
ccttgactga	atcagtaagt	acaaatagat	ccccagcat	ggctctttcc	tagaatgaaa	12600
gaaatgtcaa	gaagtctgaa	gatgattctt	gaattttgg	tttttgctat	tgctatttgg	12660
gcttgttgtc	cttgttgttg	ctattgagtt	gagctcctta	tatattctgg	ttactaatcc	12720
cttgtaatat	ggatagtctg	caaataattt	atctcattca	aagataatta	ttatttactt	12780
tcataggctg	tttttggtac	caaagggttc	tttttagaag	ataagaaaac	gaagatagct	12840
tctacaaaaa	tctgcaacaa	taagatactc	tgggtgatat	gtagcgaatt	tatgtcctta	12900
tgggctggat	ccaacaagaa	aaatatgaat	caggatgtga	tgataattat	agggccattt	12960
gataccttaa	gaaattccag	ctttcctttg	actcattttg	atatacttat	ttactgtata	13020
aattcatatg	gtattccaaa	cccttaaaga	cagatttttt	tttgctttta	aaaatgttta	13080
tgggtatata	atagttgtac	atatttatga	gacacatata	ttttgatata	agcatacaat	13140
gtgtaatgac	caaatcaggg	taattgggat	atccatcacc	tcaagcattt	atcatttctt	13200
tttgttagag	acatttcta	ttgactcttc	tagttatttt	gaaatataca	atgaattatt	13260
gttaactata	gtcatcctat	tgtgcatgcc	agactttagt	ccttctaacg	gtattttgg	13320
accacttaac	caatgcctct	ttatccttcc	cccaccctta	ctacccttcc	cagcctctgg	13380
taaccatcat	tcttctcact	atctctataa	ggctcagttt	tttttaaact	cccctatag	13440
agtgagaaca	tgcagtattt	gtctttttgt	ggctggctta	tttcacttaa	tgtaatgttc	13500
tctaatttca	tccacattat	tgcaaatgac	atgatttcat	tcttcttatg	gctgtctata	13560
tgtaccacat	tttatttatc	cactcatctg	ttgatggaca	cttaggctga	tttcatatct	13620
tggctattgt	gaatagtgtc	gtactaaaca	tgggggtgca	gatgtctctt	ccatggattg	13680
atttcctttt	ttttttctga	atatagacct	agcactggaa	ttgctggatc	atatggta	13740
tctactttta	gttttttgag	gatccctcat	actcttcccc	atagttcctg	tactaattta	13800
catttctacc	aacagtctgt	gcaagagttc	tcttttctcc	acattcttgt	cagcatccat	13860
tattgcctat	ctttttgata	aaagctat	taactggagt	gagatagtac	ttcattgtag	13920
tttttagttg	catttctcta	atgattagta	atgttgaaca	ttgtttttta	tgtacctctt	13980
ggctatttgt	atgtcttctt	ttgagaaatg	tctactcaga	tcttttgtcc	attttttaa	14040
cagatttttt	ttttgcaatt	gagttatatg	acctctttat	atattctggg	tactaatccc	14100
ttgtcagatg	ggtagtttac	aaatattttc	tctcattcaa	caggttcttt	agttcacttt	14160
gttgatggtc	tcctttgctt	tgcagaagct	ttttagcttg	acgtaactta	atttgttcat	14220
gtttgctttg	gttgccctgtg	catttgaggg	cttacctcaa	attggcccag	accaatgtcc	14280
cggagtgcct	ctgtaatgtt	tgttttttag	tagtttccata	gttttaggtc	ttaaatgtgt	14340
ctttaatcca	ttttgatttt	gtttttgtat	ctggcaagag	atagagatct	aatttcattc	14400

ttctgcatat	ggatatctag	ttttcccagc	atcattttctt	gtggaaattg	tcctttgccc	14460
aatgtatggt	cttgatgcct	ttgttgaaaa	ttagttgact	ataaatgtgt	ggattttattt	14520
gtgggttctt	tattctgttc	cattgggtcta	tgtgtctgtt	tttatgccag	tatcatgcag	14580
ttttgattat	tacaggtttg	tagtataatt	tgaagtcagg	tcatgtgatg	cctccagctt	14640
tgttcttttt	tctcagaatc	ttataatttag	aaaaacgtaa	agactccaac	aaaaaacctg	14700
ctagaactga	taaacaaatt	cattaaattt	gcaggataca	acatcaacat	acaaaattca	14760
gcagcatttc	aatatgccaa	gagcaaataa	tcttaaaaaa	aagaaagaaa	aaaaaacaag	14820
aaataatccc	atttataata	gctacaaata	aaataaaaca	cctaggaata	aaccatacca	14880
aagaagtga	agattttctac	aatgaaaact	ataaaacact	gatgaaagaa	attgaaaatg	14940
acattaaaaa	atggaaaggt	attccatggt	catggattgc	aagaatcaat	attgttaaaa	15000
tgtccatatg	atccaaaaca	atctacagat	tcaatgcaat	ccctatcaaa	ataccaatga	15060
catttctcat	tgaataaaaa	aaaaagccta	aaattttaagt	ggaaccatga	aggtagatgt	15120
ctgctatata	tagaagatta	agtactcaac	aaaccttgaa	tatgaagact	ggggaagtga	15180
ataggcagct	tcactcttct	attccctggg	gaaatttagg	agaatggatg	ttttataatg	15240
ggtagcagtt	tcttacatgt	tctcaatcag	ccataactta	ctacagtcaa	tttgaattta	15300
ttgcatttga	atatattgga	ttaaaaataa	aatcctaata	aaggagagaa	gcacatataa	15360
acctgcgtct	tatttcatgt	gttcctttct	ttgtgggtga	cttttgtttt	gaaataaaaac	15420
ctgcaaaata	acaggacagg	gtggaaggga	gatgggatcc	cctcttttatg	aagaagcagc	15480
agtccctgtt	tatcacctct	tcattttctg	ttattgagaa	ttcaagaaga	aggaggagga	15540
agagttcaca	tccacagact	ggtgtggttg	aatagttgtc	tctactgtat	tccaaatagc	15600
agccaatgag	gctgttacag	tgaagccagt	cccaagataa	ttgttctgta	cccctattct	15660
ctaagaagct	aaatttgtgt	agactgaaac	ccataaggaa	ccattgttca	aagttggctt	15720
gttcaaaagt	aaagattttt	aatagtttct	cttaattaga	ttattttcta	agacatagaa	15780
ttatgattac	ttttttatct	ctataatttt	catctctata	acgtttacaa	atactgaaat	15840
aaccttttga	aaaaattggc	ttttagcttt	acttttgcaa	tattttattt	tatcccata	15900
aaagcctagg	aaattggtac	tatgactttt	agtatgttca	tttaatatag	gaaaacacag	15960
aaactcaaag	atgttaaata	tgggtggcaa	gttcacaaag	ctgatcatta	acaacaacag	16020
ggcctgaact	cctggttttc	tgattttaatc	tgtgacagtg	cacctgggtg	cgcattgcag	16080
catcaccccc	acacttgcac	atagaacctt	tcctagtttg	ctttgctcca	tgatgacctat	16140
tactgttctt	tctacttcaa	aataagcaaa	ttatcttaca	gattcagagc	tggtagcaggt	16200
gtgctgtcaa	gcagcccat	ccattagtca	gcttgtgggt	cactcacatt	aaagtattga	16260
cctaaatggg	atattttatct	agataattct	accttgttat	tttcaaagcc	ccagtcttgt	16320
ttgctaattc	tgtgcatcat	ttttctctga	ttctgaaagg	caaaattttg	ttgggcaatt	16380
gctgtaatat	gagttttatc	tccttttagag	tcgaatggat	gtgtatatgt	cacatgctcc	16440
cactggttca	tcagtagaca	acattctgca	tataaaacag	gtagagtctt	agtcattggaa	16500
aaccattcca	atccttattt	tcaatatatt	taaaaagaca	gaattgacct	tgtaaacagg	16560
cctaccctaa	gaatcttaag	agcttgcttc	cagtttgtcc	ttgctgcctt	ctgtatgcct	16620
tgatttccct	ggaatttaag	agaaaggatg	ttatggtaca	gaccaagtag	atgacataaa	16680
tgaacaccac	cttaaatcag	agttttaaaa	ataggccctg	aactgaagca	agaggtaaac	16740
tagggaagcc	tcaggagaac	tgagacttct	ccagagagaa	gtatctggga	tttaacttct	16800
ttctaattgag	gcttggtttt	ccatgaactt	ttcctttaaa	ccaagggggg	tattgctcat	16860
ctttctggtg	agccccattt	gtcataattg	taaaattggg	ggttacatcc	ttctgggtgat	16920
ctaggagccc	tattttctgc	ctagcataca	gcatttttct	aaaatttgct	gttagctttc	16980
atgattctta	ccctaactat	tctttttcta	aaaaacattt	gtttcagctt	taccactctg	17040
atgaattcag	agcttatgac	tggggaaatg	acgctgataa	tatgaaacat	tacaatcagg	17100
tgagctattt	acagtaaccc	cagcatgctg	attttgataa	attataataa	aaaattattt	17160
gaggggtggaa	agactcctac	ctgtcatttg	gtggcattta	tactgataga	actttttttt	17220
aaaaaaattt	taattttaat	tttaatttat	ttcagaaaat	ttataaatta	aagaagcata	17280
tacaaagaaa	cttacatcat	gtgtaatcct	tccatccaga	gataactaga	tgtactaaca	17340
ttttggtgta	tttattccaa	ttttctcagt	atttatattgc	ttttagacaa	cttttaattct	17400
ttctattttta	cttaagctat	agtaagagat	aactaatata	actgagggat	ttttaaatgc	17460
attttttaatg	gctacataat	agaaattatt	tcataaaaaat	ctttacagca	taaatgaata	17520
tacacttttt	aataccaaca	gaaaaattag	aattccatat	gaaagttgaa	taagtattac	17580
ccaacattga	agacttgggt	cgtaaggcat	ctttctccat	atagctttat	gacataaaaa	17640
tctgtagcct	tgttttagcac	cgtactttta	attaatcctg	tcaccatttt	tctgttctca	17700
tagccagggg	cttggcttat	aagtatgaac	taagcaaact	aaattaaatt	gttttaagta	17760
ttttcccagg	ctatcatatt	ttaagctatt	tactggtgca	actatagatt	attaataagt	17820
tgtttctgag	gatcaaaaca	atcagactaa	tcaattttctc	aataatgaat	tggcctgtta	17880

gaggaataat	tctactaatc	cttaaaacca	ctacaagaga	tagaccatgt	atatttttatt	17940
tattttttaa	aataagttta	agatgtgatt	tacatacaag	aacattacta	attttgtgtg	18000
tcccatttaa	taagttttga	caaatatatt	tatttgtgta	accacaccac	aatctaaata	18060
taggacgttt	atatcaccac	taaaagtttt	tttctgtctc	ctgagactat	ttatagacac	18120
aaatgcgtgt	atttgcaaat	gcttagaaaa	ggtctagaaa	aaaaaacagt	aaatgtttaa	18180
gtggttatct	tcagagagaa	gaaagaagaa	aagaagtgga	tggacatgaa	acagtaaagg	18240
accctcattt	tggactttac	atatgtctgt	tttcttccat	tattttgaat	aaacatgcta	18300
tattttataa	ttattttacat	ttacaagaaa	atgaaacaaa	atcaacacgc	acattcaaga	18360
tcattatggt	caagtactaa	agtatgtgag	agtgttaatg	tccttagaat	ttggccacag	18420
ttagctggtc	ctactctgct	ccaagccggt	cctattttgt	gaattaatct	catttgatgc	18480
caatttttat	tacattctct	ccaaaaaact	agtctcaaca	gtttgctctc	tcctcaagtt	18540
cacagcatta	tctctgctat	atctatatatt	tattgagtat	aagagaatta	acccatgtaa	18600
gctccatgag	ggtagggatt	tctcatcggt	ttgttcacca	gtgttttctc	atcttgaaga	18660
gtacatgaca	attactgggc	tcccagtatc	tatgtgttgc	attaatgaaa	tttcttaact	18720
ttaatctacc	tcaaaatgtc	tctatcttct	tgattctctc	cttcccttct	ctatcagaaa	18780
atgatgggcc	tcttattttc	caagttatct	cggctcctgtg	cccttgatcc	catctcttct	18840
cacttcccc	tccttcctgc	ctccattctc	ctgtccctta	tgaaaaacaa	gcaagaccat	18900
caattctatc	aagttatcat	tatgtcactc	tgttcttctc	aacatatttt	tagtattgaa	18960
gagggcttct	tctacttact	cctgaacctt	gtacaatgta	gttttaggtct	tcactctttt	19020
atcatagcta	ccttatttta	agtcacccat	ggcttttaat	tgccaaatcc	aatggcctat	19080
cttcaccttt	tgaaatgtgt	tatgttcggt	accacagctc	ccttgaaact	cagtccccctg	19140
acttggaact	ccataacaca	atgatttctg	attttcttct	tgtttgtgat	tgttcctttt	19200
gtcccaggca	ctggctactc	caccttccac	ctctctgaaa	tcattagcat	tccccaagga	19260
ttcttcaaaa	ctctcttctc	tccttggaga	agtcagcata	gctttaattt	ggaccatttc	19320
tatggcttat	ctagattttt	tcaggacttg	ccttcaacct	attcttctctg	taggtgatcc	19380
cattaactgt	tgcccatatg	gtagtccgaa	gacagacctc	cgagaaatga	cccttgtctc	19440
caaaacttcc	gcaatatgtc	caaatttctc	agcctgacat	tcagactttg	attatctgcc	19500
tccaagttta	tatcctatca	tattccttta	tatatcttgt	tctccaggta	cactgggaag	19560
cttgccattc	ctgatcatag	cctacaaact	cttctgctc	cccactcacc	ctcatctctg	19620
ctgtcaaaat	gcaaccttcc	ctcaagagtc	atttcacagg	acccctcttt	ctatgaagcc	19680
ctcaggtgga	aataattttt	tgcctttttt	tccattttat	ttttggagtg	tttatggcat	19740
ttaacatacc	ttactttgta	tacaaatatt	tgccttgctc	cctcttttgc	aaatttctta	19800
aaggtagaga	ccattgtatg	ttttcttcat	atgttgctgg	tgcctaacag	aactatggcc	19860
attgtccaca	ttcatttagc	agcctttgta	gttattgctt	tgaggagctt	cctctcatga	19920
atgcccttgc	tttctctccc	acagagtcac	ccccctatat	atgacctgac	tgccatgaaa	19980
gtgcctactg	ctatttgggc	tgggtggacat	gatgtcctcg	taacacccca	ggatgtggcc	20040
aggatactcc	ctcaaataca	gagtcttcat	tactttaagc	tattgccaga	ttggaaccac	20100
tttgattttg	tctggggcct	cgatgccctt	caacggatgt	acagtgaaat	catagcttta	20160
atgaaggcat	attcctaata	gcaatgcatt	tacttttcaa	ttaaaagtgt	cttccaagcc	20220
cataagggac	tttagaaaaa	atggtaacca	acaatgaggt	tgtccccccag	cacctgtggg	20280
gagatgcaca	gtggagtctg	ttttccaagt	caattgtggt	agtgttattt	atgtttagag	20340
acatctttgc	atgggaccat	ctacaggctc	ttataaaca	tgaggtagat	taggcaaaaa	20400
gataaacaag	ttgctactct	atctggcatt	taagtctaata	taaattgtaa	tttttagggc	20460
ataccatgaa	gtatagaaat	gtctgaagct	tcaaaggaac	agtgaaattc	ctttaagggtc	20520
ctatatggaa	acctctgttg	tcatttttatt	tatatggatt	gctatggcaa	tggacagagt	20580
gtgggattag	gaggagggcc	tgtaacttct	ttataaaagt	ttcttagcta	tcctgaagat	20640
gtatagacat	ttttactttt	ttaggtattt	tcaacatcag	aaattcaaaa	aagtcccaaa	20700
agattcttcc	agagaagccc	tcttttctta	caatcttctc	cctggctatc	tgcgtaaacy	20760
gaatcttgaa	cccataatag	gatacatgta	taaaatcttc	cttattaaag	cagaaataaa	20820
ttgtacagca	tcaatatcat	tttataatca	tagggagggt	tctttgttta	gcatgtaatg	20880
ccccctttac	aggctttttg	ttctttgagg	ggtttgaaca	ttccatgaaa	aactgacaga	20940
taggaaactg	acaataaaaag	attgagctaa	agatggaagc	agaaagtact	aggctagata	21000
gtctctaaac	attaagtatt	ttcttctctc	atcttaaaaag	caatgagaag	ccaccaaaaat	21060
attttaccta	atggaaacct	gattgccgca	tttttgtaac	caccactttg	gctgctacat	21120
agagaatgga	ttagaagatg	ccaacaaaag	attctgagca	agtctgtaaa	tctgatcaag	21180
tgttctgatg	caggctgata	tccttctgtg	ctaagagaga	tgatccttgg	aaaatccaga	21240
gccagctcca	taatactttc	ctgctctgct	ggcaaatcca	caagctgctg	gccccgtggag	21300
ccattcttct	ctcaaaaacta	gcattcatca	atttaagtga	tacgtattga	tggggaataa	21360


```

tggtcactat gaaaaccatg tgataatat gaaaaatacc catgatataa tgttatgtga 21420
agagaagaaa atgaaactgg tagaactatg tgattgcaaa tatatacaaa tattaataca 21480
attatatgac tttataaaaat atttgtatat aatgaaaact gaagcaatat aaaaaataaa 21540
attagttgtg tcagggtagt aacatgatga gtgattaata gtttttaatt tttaatatag 21600
taatgacata atgttacaac ttgtccaaat ctcacaaaca taatattcag taaaggaaga 21660
taaacataaa agaatacata ttttattata catttttatg taggctaatt gatggttctg 21720
aaagccttaa aaagcttact tttaggagga gaatcatgcc ttggaggact ctagggtcca 21780
gaaaaatgtc ctaatactag agctagggtgc agtcagatta attataatac atttcattat 21840
tttgtctgga ataccaagat gacttccaag caggaatgga gtctagcaac actttactga 21900
tggggaactt ggccacagac ttgtaataca aatttttggga tatgttgaca atgtttctcc 21960
ttatttttct tacttataca aagcaagaaa tttggctcac aaccttgaaa cagacttacc 22020
aggttcctcc agtttcccaa gcctcaatat ctcattgcta tttttaa 22067

```

<210> 4

<211> 392

<212> PRT

<213> Homo sapiens

<400> 4

```

Met Arg Phe Leu Gly Leu Val Val Cys Leu Val Leu Trp Thr Leu His
1          5          10          15
Ser Glu Gly Ser Gly Gly Lys Leu Thr Ala Val Asp Pro Glu Thr Asn
20          25          30
Met Asn Val Ser Glu Ile Ile Ser Tyr Trp Gly Phe Pro Ser Glu Glu
35          40          45
Tyr Leu Val Glu Thr Glu Asp Gly Tyr Ile Leu Cys Leu Asn Arg Ile
50          55          60
Pro His Gly Arg Lys Asn His Ser Asp Lys Gly Pro Lys Pro Val Val
65          70          75          80
Phe Leu Gln His Gly Leu Leu Ala Asp Ser Ser Asn Trp Val Thr Asn
85          90          95
Leu Ala Asn Ser Ser Leu Gly Phe Ile Leu Ala Asp Ala Gly Phe Asp
100         105         110
Val Trp Met Gly Asn Ser Arg Gly Asn Thr Trp Ser Arg Lys His Lys
115         120         125
Thr Leu Ser Val Ser Gln Asp Glu Phe Trp Ala Phe Ser Tyr Asp Glu
130         135         140
Met Ala Lys Tyr Asp Leu Pro Ala Ser Ile Asn Phe Ile Leu Asn Lys
145         150         155         160
Thr Gly Gln Glu Gln Val Tyr Tyr Val Gly His Ser Gln Gly Thr Thr
165         170         175
Ile Gly Phe Ile Ala Phe Ser Gln Ile Pro Glu Leu Ala Lys Arg Ile
180         185         190
Lys Met Phe Phe Ala Leu Gly Pro Val Ala Ser Val Ala Phe Cys Thr
195         200         205
Ser Pro Met Ala Lys Leu Gly Arg Leu Pro Asp His Leu Ile Lys Asp
210         215         220
Leu Phe Gly Asp Lys Glu Phe Leu Pro Gln Ser Ala Phe Leu Lys Trp
225         230         235         240
Leu Gly Thr His Val Cys Thr His Val Ile Leu Lys Glu Leu Cys Gly
245         250         255
Asn Leu Cys Phe Leu Leu Cys Gly Phe Asn Glu Arg Asn Leu Asn Met
260         265         270
Ser Arg Val Asp Val Tyr Thr Thr His Ser Pro Ala Gly Thr Ser Val
275         280         285
Gln Asn Met Leu His Trp Ser Gln Ala Val Lys Phe Gln Lys Phe Gln
290         295         300
Ala Phe Asp Trp Gly Ser Ser Ala Lys Asn Tyr Phe His Tyr Asn Gln

```

305					310					315					320
Ser	Tyr	Pro	Pro	Thr	Tyr	Asn	Val	Lys	Asp	Met	Leu	Val	Pro	Thr	Ala
				325					330					335	
Val	Trp	Ser	Gly	Gly	His	Asp	Trp	Leu	Ala	Asp	Val	Tyr	Asp	Val	Asn
			340					345					350		
Ile	Leu	Leu	Thr	Gln	Ile	Thr	Asn	Leu	Val	Phe	His	Glu	Ser	Ile	Pro
		355					360					365			
Glu	Trp	Glu	His	Leu	Asp	Phe	Ile	Trp	Gly	Leu	Asp	Ala	Pro	Trp	Arg
	370					375					380				
Leu	Tyr	Asn	Lys	Ile	Ile	Asn	Leu								
385					390										

1